# ENGINEERING NEWS-RECORD

In the heart of New York's "Gashouse district," formwork rises for $30,000,000 housing project

# "Torque-Tailored" MOTORS

## PULLED THIS FLOOD-CONTROL JOB "OUT OF A HOLE"

SIX big flood pumps were needed to lift the waters of Cincinnati's Mill Creek over the barrier dam when the Ohio River was in flood. Two factors dictated the use of synchronous motors for driving these pumps—the large amount of power required, and the low pump speed.

But, the pumps were below the flood level of the Ohio—literally "in a hole." This resulted in a siphoning action which caused an unusual peak in the starting torque required by the pumps (see white arrow below). To get over this peak with synchronous motors of conventional design would have required oversized motors with high starting currents which would have resulted in excessive voltage disturbances. The solution lay in "tailoring" the torque characteristics of the synchronous motors to meet the pumps' individual needs.

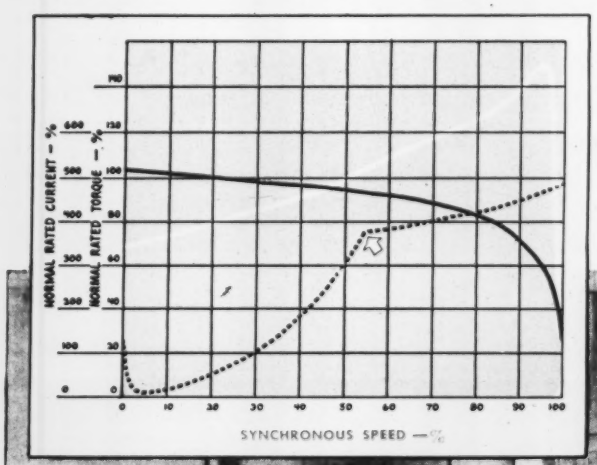
### G.E. finds the answer

Our engineers prepared specifications for synchronous motors which convinced the flood-control engineers that these motors, as designed and built by General Electric, were right for the job *in advance* of installation. Our recommendation was for six specially built vertical synchronous motors, rated 6500 hp at 180 rpm, unity power factor.

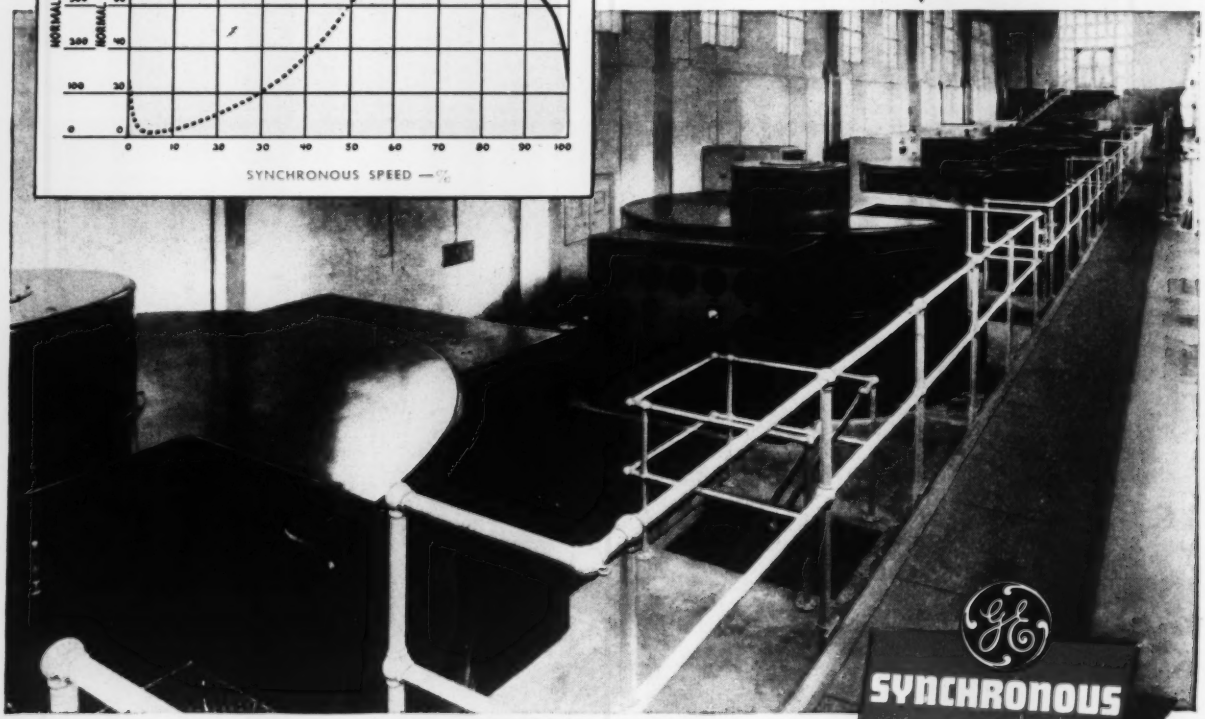
The white line on the chart shows how these G-E motors provide ample starting, accelerating, and pull-in and pull-out torques. Motor torque continuously exceeds pump requirements by a safe but never excessive margin. Starting current (thin black line) is kept well within the capacity of the power system. Recently the pumps were called into action to divert flood waters, and the motors proved the soundness of their design for the job.

### For jobs of every size

Whether your synchronous motor needs call for special engineering or a standard design, you will find definite advantages in coming first to General Electric for help in writing specifications, or for a quotation on the most suitable and economical unit. G.E. has the widest range of motors available—in vertical and horizontal construction, and in ratings from 20 to 65,000 hp. They combine reliability and durability with the trim good looks that can add much to the prestige of your job. *Apparatus Dept., General Electric Co., Schenectady 5, N.Y.*




***TEST RESULTS,*** showing how motor-torque and -current characteristics matched pump requirements and the characteristics of the power supply. ***THE MODERN GOOD LOOKS*** of G-E synchronous motors match their outstanding electrical behavior. A feature of this installation is the use of built-in gage boards with instruments for recording bearing, winding, and cooling-water temperatures.




**GENERAL ELECTRIC**

750-252-8030

# News of the Week

ENGINEERING NEWS-RECORD • JUNE 20, 1946 • VOLUME 136 • NUMBER 25

## Urge limits on Jap industry to control war potentials

***National Engineers Committee, reporting to War, Navy and State departments, recommends industrial disarmament of Japan, but would not hamper needs of its people***

Sharp limitations and strict controls of Japanese industries with war potentials are recommended to the War, Navy and State Departments by the National Engineers Committee of the Engineers Joint Council in a report on the industrial disarmament of Japan. The recommended restrictions fall upon seven elements of Japanese economy: mineral and metal industries, heavy chemical industries, fuels, electric power, construction, scientific research and atomic energy development.

The program as drawn up by the committee, headed by Carlton S. Proctor, New York consulting engineer, seeks to eliminate any threat of a re-militarized Japan without throwing Japanese economy into a chaotic state with resultant upsets throughout the Far East. Thus, it endeavors to provide materials and manufacturing capacity for the essential peacetime needs of the Japanese people.

### Control over construction

As one step to insure against a resurgence of Japan, the committee recommends strict control of new construction "to assure that such plants may not be convertible into war plants." This regulation would be maintained by a Board of Construction Control, composed of experts in every industry with a war potential, which would pass on all requests for construction permits. The committee believes that this would guarantee satisfactorily against illegal production of war-essential raw materials—nitrogen, synthetic oil, aluminum, steel and atomic energy—all of which require large installations.

### Power to be limited

A second control recommended by the committee is the allocation and limitation of electric power supply. The report advises removal of all thermal power plants except in southwest Honshu and northern Kyushu where hydro capacity is insufficient for normal civilian needs. In addition any hydro facilities with an output beyond purely peacetime uses should be eliminated.

The committee suggests that the thermal power plants could be moved to other countries as reparations.

Cut-backs in production of metals and minerals as suggested by the group are: iron and steel to 1,600,000 metric tons of products from a war peak of 9,000,000 tons, copper to 70,000 tons, lead 17,000 tons, zinc 30,000 tons and tin 750 tons refinery capacity plus imports to meet peace needs which should not exceed 2,000 to 3,500 tons. Aluminum production which reached a war-time high of 312,000,000 lb. and magnesium which was produced at the annual rate of 10,600,000 lb. would be eliminated entirely. Imports of 10-15,000,000 lb. and 1,000,000 lb., respectively, should be allowed, the committee believes.

Other recommendations are strict limitation of heavy chemical production, elimination of synthetic fuel manufacture and strict control of coal mining and petroleum storage. Pre-Pearl Harbor storage capacity was 55,000,000 bbl. All storage in excess of 6-7,000,000 bbl. should be destroyed or removed. Rigid limitation of scientific research is recommended by the committee, and complete

(*Continued on p.* 15)

## Award contracts for western dam work

**Contracts for the construction of parts of three major California irrigation projects were awarded recently, and work was expected to start shortly.**

A contract for construction of Matilija Dam in Ventura County, Calif., has been let to Guy F. Atkinson & Co. of San Francisco, and Kier Co. and Bressi-Bevanda, Constructors, of Los Angeles, Calif., on a joint bid of $1,279,945.

Located on Matilija Creek, the dam will be arch-type concrete, impounding approximately 7,000 acre-ft. of water. It will be 165 ft. in height and 600 ft. in length, with spillway crest 150 ft.

At the same time, it was indicated that preliminary site-testing was to start immediately on Hoffman Dam, on Coyote Creek in Ventura county. Of earth-fill construction, this dam will be 120 ft. high, with a 103-ft. spillway crest. Early estimates has put construction costs at $1,500,000.

### Coachella irrigation canal

A $990,229 contract for construction work on a 7-mile section of the 145-mile Coachella irrigation canal in southern California has been awarded to the Shea Co. and the Morrison-Knudsen Co., both of Los Angeles.

Work under the new contract will bring the canal to within 30 miles of completion. The waterway is part of the All-American canal system of the Boulder Canyon project.

The contract for construction of Granby Dam on the Colorado River about 50 miles northwest of Denver has been authorized for award to seven contracting firms on a joint bid of $5,988,969, it was announced June 10.

One of the key structures on the huge irrigation and hydroelectric project being developed by the Bureau of Reclamation in northern Colorado, Granby Dam will be an earth-fill structure 885 ft. long at its crest and 232 ft. above the bed of the river.

Three bids were received, the lowest submitted by Granby Constructors of Denver, a joint company made up of the following firms: Peter Kiewit Sons Company, Grafe-Callahan Construction Company, Condon-Cunningham, and Gunther and Shirley, all Nebraska firms; Brown and Root, Inc., of Texas; Martin Wunderlich of Missouri; and Ed. H. Honnen Construction Company of Colorado.

## NEWS IN BRIEF

*In telegraphic form, here are latest news developments on the engineering and construction front during the week.*

**Construction**—A $1,200,000 cold storage plant is to be built at *Atlanta, Ga.*, by the Southern United Co. of Jackson, Miss. . . . Work has begun on clearing the site for a $750,000 engineering building at Duke University, *Durham, N. C.* . . . A $1,000,000 construction program has been announced for St. Vincent's Hospital at *Birmingham, Ala.* . . . Two new buildings to cost $350,000 each are now under construction for Valparaiso University, *Valparaiso, Ind.* . . . U. S. Steel Corp. will spend $25,000,000 in construction and new equipment for its Columbia Steel Co. plant at *Pittsburg, Calif.* . . . Danahy-Faxon Stores, Inc., will build a $1,000,000 warehouse and supermarket in *Buffalo, N. Y.* . . . *Onondaga County, N. Y.* will erect three buildings to cost $2,125,000. . . . Virtually all construction in *Louisville, Ky.*, and vicinity is at a standstill on account of shortage of sand and gravel and inability to get concrete. . . . British Columbia Cement Co. Ltd. plans a $3,000,000 plant near *Qualicum Beach, B. C.*

**Housing**—Southeastern Investment Co. of *Mobile, Ala.*, plans a $3,000,000 residential development. . . . A *San Bernardino, Calif.* veterans' housing project to cost over $500,000 has been approved by the city planning commission for immediate construction of 68 homes costing between $7,000 and $8,000 each. . . . Ernest E. Anders Realty Co., of *Jacksonville, Fla.*, will construct 100 houses there. Unofficial cost of the project is $600,000. . . . A contract for 96 single-family and 5 semi-detached dwellings at *Beaconsfield, N. B.*, has been awarded by Housing Enterprises, Ltd., Toronto, Ont., to John Flood & Sons, St. John, N. B. . . . Acting to relieve the housing shortage in *Hogansville, Ga.*, and *Winnsboro, S. C.*, U. S. Rubber Co. has announced plans for the construction of 131 houses and apartments for plant personnel in the two communities. . . . At *Birmingham, Ala.*, Marbury and Boriss Construction Co. has been awarded a contract for 200 houses. The estimated cost will be between $1,500,000 and $2,000,000.

# Ozone for sewage treatment scored by sanitary engineers in Northwest

### Dissatisfaction with processe claims and with progress on Kelso, Wash., plant bring action by Pacific Northwest Sewage Works Assn.

Cities considering the use of ozone for sewage treatment are given small comfort in a report recently made public by the Northwest Sewage Works Association and addressed to communities in the states of Washington, Oregon and Idaho.

The association report discourages cities "from entertaining proposals which claim ozonation as the principal means of sewage treatment," and was based in part on a study of an installation now being made at Kelso, Wash., by a concern known as Amozone of Oregon. This organization, states the report, appears to be well financed by persons who are thoroughly "sold" on the system and its possibilities.

#### Data are lacking

Among other things, the report points out that Amozone of Oregon has presented no important data to support its statements of efficiency, either with respect to the acceptable treatment and disposal of sewage or in the matter of cost of operation of plants such as they propose. Experimental results cited from a pilot-plant operation in New Jersey "could not in themselves justify extravagant claims made by proponents of the system."

It was pointed out that Edward S. Marnon, president of Amozone of Oregon, and J. M. Daily, a technical adviser representing American Ozone Co. of Chicago appeared before a committee of the association early in May and agreed to provide data in support of their claims.

They also expressed willingness to have members of the committee carry on investigations of the plant they are now building for the city of Kelso, Wash. Completion of the plant has been delayed, however, by reported failure to obtain certain mechanical devices.

The committee has recommended that if and when the Kelso plant is completed an investigation be made of its operation. If necessary the association will underwrite a part or all of the cost of the suggested investigation. Meantime, officials of communities in the three-state area are being advised not to make any commitments relating to sewage treatment with ozone.

Members of the committee making the report were: R. E. Koon, consulting engineer of Portland, chairman; Carl E. Green, consulting engineer, Portland; R. G. Tyler, professor of sanitary engineering, University of Washington; Fred Merryfield, professor of sanitary engineering, Oregon State College; Curtiss M. Everts, Jr., Oregon state sanitary engineer; H. C. Clare, director, Idaho health engineering division; David B. Charlton, Charlton Laboratories, Portland; and Roy M. Harris, chief, Washington division of public health.

Copies of the report may be obtained from William P. Hughes, secretary, Pacific Northwest Sewage Works Association, City Engineer's Office, City Hall, Lewiston, Idaho.

#### New Jersey experiments

Several years ago Ozone Processes, Inc., of Philadelphia—which has no connection with the companies mentioned in the committee's report—conducted experimental work on the effect of ozone on sewage at Moorestown, N. J.

A spokesman for Ozone Processes, Inc., pointed out last week to *Engineering News-Record* that the results of this work were not then considered conclusive so far as treatment was concerned, but that much had been learned of the efficacy of ozone for sewage odor control. As a result, ozone odor control equipment was purchased by New York City for use in the sludge storage areas at the Wards Island treatment works.

Ozone Processes, Inc., states that it has confined its efforts so far as sewage treatment is concerned only to the installation of odor control equipment.

---

An experiment to prevent corrosion of steel members of the Golden Gate Bridge is now being conducted in San Francisco. A news story in *ENR* May 30 issue, vol. p. 832, erroneously said the experiment was being made on the San Francisco-Oakland Bay Bridge.

**ENGINEERING NEWS-RECORD.** Published every Thursday. **Return postage guaranteed.** Vol. 136, No. 25. Price 25c per copy. Allow at least ten days for change of address. All communications about subscriptions should be addressed to the Director of Circulation, 99-129 N. Broadway, Albany 1, N. Y., or 330 W. 42nd Street, New York 18, N. Y. Subscriptions, United States and U. S. Possessions, $5.00 for one year, $8.00 for two years, $10.00 for three years. Canada $6.00 for one year, $12.00 for three years. Pan American countries, $10.00 for one year, $20.00 for three years. All other countries, $20.00 for one year, $40 for three years. Please indicate position and company connection on all subscription orders. Entered as second-class matter October 29, 1936, at the Post Office at Albany, N. Y., under the Act of March 3, 1879. Printed in the U.S.A. Cable Address: "McGraw-Hill New York." Member A.B.P. Member A.B.C. Copyright 1946 by McGraw-Hill Publishing Company, Inc. All rights reserved. James H. McGraw, Founder and Honorary Chairman; JAMES H. McGRAW, JR., President; CURTIS W. McGRAW, Senior Vice-President and Treasurer; JOSEPH A. GERARDI, Secretary; NELSON BOND, Director of Advertising; EUGENE DUFFIELD, Editorial Assistant to the President; and J. E. BLACKBURN, JR., Director of Circulation. **Publication office, 99-129 North Broadway, Albany 1, N. Y. Editorial and Executive Office: 330 West 42nd St., New York 18.** District Managers and Branch Offices: Fred G. Hudson and L. H. Hunt, 520 N. Michigan Ave., Chicago 11; 738-9 Oliver Building, Pittsburgh; J. W. Otterson, 68 Post St., San Francisco, 6; Aldwych House, London, W.C. 2, England; Washington; J. M. Spackman, New York; A. B. Cozzens, Philadelphia; E. E. Duff, Jr., Cleveland; B. F. Horn, Detroit; W. G. Payne, St. Louis; R. N. Phelan, Los Angeles; J. I. Ballard, Boston; Black Maultsby, Atlanta, Ga.

# U.S. water supply, sewerage, garbage disposal needs placed at $7 billion

***U. S. Public Health Service surveys show huge construction total needed by nation's municipalities—Raises earlier estimates.***

Construction needs of the entire United States for water supply and sewerage facilities and refuse and garbage disposal works are placed at nearly $7,000,000,000 by the Sanitary Engineering Division of the United States Public Health Service, based upon a comprehensive survey now being carried out. As of May 31, 1946, information on the sanitation needs of 3,850 United States communities had already been compiled.

These detailed data cover approximately 18.8 percent of the communities in America having a population of 200 or over. A breakdown of the data reveals that the surveyed communities have a need for the construction of health facilities in the form of waterworks, sewerage works, and refuse and garbage collection and disposal works estimated to cost $2,187,024,000. An inventory of needs in the surveyed communities is broken down in Table 1 into: (a) projects ready for construction or already underway, (b) work in the planning stage, and (c) requirements in idea stage only and including projects needed, in the opinion of the sanitary engineer making the survey, even though the local government has not recognized this need.

Assuming that the returns in Table 1 were from a representative cross-section of American communities, and on the basis of a total of 16,793 incorporated and an estimated 3,594 unincorporated communities, the total cost of sanitation needs for the entire United States was calculated to be $6,855,829,000. Of this total nearly one billion dollars is work already planned, while about six billion dollars is still in the planning or idea stage, as shown in Table 2.

In computing Table 2, the data obtained for New York City for water and sewerage were taken out of Table 1 before the conversion factor was applied. After the conversion factor was used the New York figures were then added to secure the amounts shown in Table 2. This method was followed because the data reported for New York City are considered out of proportion to the United States as a whole.

The $4,417,060,000 figure of Table 2 for total sewerage needs and the $2,190,251,000 total for water supply needs are far greater than the requirements outlined in the Public Health Service reports of January 7, 1944 and July 7, 1944 (*ENR* Oct. 5, 1944, vol. p. 421). Needs at that time were estimated at $2,255,150,000 for sewerage and sewage treatment and $803,300,000 for water supply improvements.

### Old figures incomplete

These older figures were based on information available in the files of the Public Health Service and, on experiences drawn from the Ohio River Pollution Survey. They did not represent actual field investigations. Current construction prices were used, of course, in preparing Tables 1 and 2.

The current survey of the Public Health Service has been obtained from the records of the PHS district offices and the various state departments of health. Where these sources did not provide comprehensive information, individual community surveys were made.

The data obtained on individual communities are quite complete. They provide estimates of the requirements for lengths and sizes of pipe, types and capacities of treatment plants, chlorinators, number and capacity of pumps, and other details on the needs to supply adequate sanitation facilities in these communities.

*TABLE I—Inventory of needs of 3,850 communities, pop. 200 or over*

| Type | Plans Completed | Plans in Progress | "Idea" Stage | Total |
|---|---|---|---|---|
| Water | $202,049,000 | $132,670,000 | $206,038,000 | $540,757,000 |
| Sewerage | 164,697,000 | 242,520,000 | 1,176,322,000 | 1,583,539,000 |
| Garbage and Refuse | 9,563,000 | 14,728,000 | 38,438,000 | 62,729,000 |
| TOTAL | $376,309,000 | $389,918,000 | $1,420,798,000 | $2,187,025,000 |

*TABLE II—Forecasted needs, all U. S. communities, pop. 200 or over*

| Type | Plans Completed | Plans in Progress | "Idea" Stage | Total |
|---|---|---|---|---|
| Water | $414,943,000 | $701,773,000 | $1,073,535,000 | $2,190,251,000 |
| Sewerage | 468,023,000 | 1,054,747,000 | 2,894,290,000 | 4,417,060,000 |
| Garbage and Refuse | 40,978,000 | 61,115,000 | 146,425,000 | 248,518,000 |
| TOTAL | $923,944,000 | $1,817,635,000 | $4,114,250,000 | $6,855,829,000 |

## Calif. coastal cities prepare sewage plans

***Joint plan for six cities due soon as municipalities seek to beat State Health Department deadline***

A sewage disposal plan for the California cities of Oakland, Berkeley, Alameda, Piedmont, Emeryville and Albany will soon be available for public scrutiny on the basis of a statement by John S. Longwell, chief engineer and general manager of the East Bay Municipal Utility District, that a survey had been completed by a board of three consulting engineers.

The special board, composed of N. T. Veatch, Kansas City, Samuel E. Greeley, Chicago, and Clyde C. Kennedy, San Francisco, was engaged by the district last April to study the sewage disposal problems of the six cities. Working from former reports and figures prepared by engineers from each city and the district, the consultants made recommendations for the most economic combination of interceptor lines, pumping plants, treatment plants, and outfall lines.

The contents of the survey will not be made public, however, until the district's board of directors and the state engineer approve the plan. The project has been variously estimated to cost from $15,000,000 to $20,000,000, with $4,000,000 of this amount available from state funds.

The survey was rushed because of recent statements from the State Department of Health to the effect that no permits would be issued after Jan. 1, 1947, for the dumping of untreated sewage into California bays, rivers or coastal waters. With a probable cost figure for the most feasible plan as revealed by the consultants' study, district officials hope to have a bond issue on the November ballot.

## Consider $25 million loan to finance Boston airport

The Massachusetts Legislative Committee on Aeronautics last week reported favorably on a proposition to float a $25,000,000 bond issue to finance completion of Boston's Logan International Airport.

The committees estimated that about $15,000,000 will be needed during the fiscal year 1946-1947, and added an additional $10,000,000 to its recommendations on the theory that construction would be expedited if the full amount of money were available.

If the bond issue is authorized by the legislature, the state's total investment in the airport will be $50,000,000.

# DEVELOPMENTS BEYOND U. S. BORDERS

*Digested from reports by Engineering News-Record correspondents and the McGraw-Hill World News Bureau*

***Mexico's wartime building boom continues as land values mount—Dutch engineers reorganize—England to build new docking facilities***

Although money invested in construction enterprises earns a lower rate of interest than other investments, the speculative factor is serving along with direct construction needs to keep Mexico's building boom alive. During World War II, at least $400,000,000 were spent on building projects.

In Mexico City alone, 100,000 new buildings were built from 1939 through 1945. The rate of construction is increasing and it is estimated that this trend will continue for some time. Permits for 4,440 units, valued at $15,100,000 were issued in 1940, while last year 6,746 permits were issued for construction with a value of $46,900,000.

Part of the increase in value was due to rising costs of property and materials. In the heart of the city, land values have jumped 700 to 1,100 percent and the official index shows that building materials have gone up 2½ times.

Mexico City's largest hotel, the Del Prado—an 11-story, 600-room structure—is nearing completion and will open in about four months. A group of U. S. and Mexican investors, organized as "Commercial Interamericana", are planning to build a Radio and Music Hall City in Mexico City at a cost of 4.5 to 5 million dollars.

Resumption of world trade through the war-deadened port of Vera Cruz has promoted an extensive program of construction which will call for expenditure of $3,000,000 during the next five years. Units called for in the program are warehouses, refrigeration plants, ship yards and tourist establishments. New docks are under construction. Recently a power plant was completed along with hard surfacing about 60 miles of the cities roads.

Over on the Gulf of Lower California, the Mexican government has announced the construction of a 1,500-foot concrete-steel pier at the free port of Rocky Point. In addition, a railroad will be built from San Luis, 25 miles south of Yuma, Ariz., to connect with the line between Mexicali and Rocky Point. Rocky Point gives Arizona an ocean outlet less than 150 miles from Phoenix via Gila Bend.

## Transport . . . .

**England**—Construction of a $2,000,000 passenger terminal building at Ocean Dock, Southampton, has been approved by directors of the Southern Railway. The two-story building is to be started in October and will take about a year.

Ground floor will contain a railway station with facilities for two complete boat trains, as well as an area for autos and trucks. The second floor will contain customs and immigration sections, and balconies for sightseers and visitors. The structure will be capable of handling 2,000 passengers at a time.

**Brazil**—A 60 mile railroad to link Tres Coracoes Pouso Alegre in Minas Gereas State will be built by the Rede Maneira de Viacao Railroad. The line and a 50-mile electrification program will cost $10,500,000.

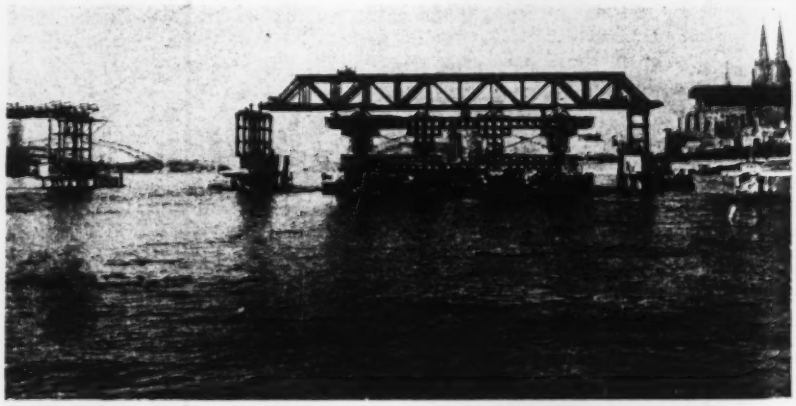
Rerouting of non-commercial traffic off Rio de Janeiro's main business street, Avenida Rio Branco, will be made possible by a 100 yard automobile tunnel through the foothills of Corcovado mountain. Local firms are expected to do the job which will link the Copacabana residential section with the northern residential and industrial area.

## Miscellany . . .

**Bolivia**—Future generations of Bolivian engineers will have a practical memorial to remind them of the work of a North American member of their profession who helped to improve engineering studies here and who helped in preparing health plans now getting under way. A modern, scientific laboratory for the study of sanitary engineering is now being set up at the National Technical University at LaPaz, and named the "Laboratorio Hollett" in honor of Lt. Col. A. R. Hollett, former assistant engineering school dean at the University of North Carolina.

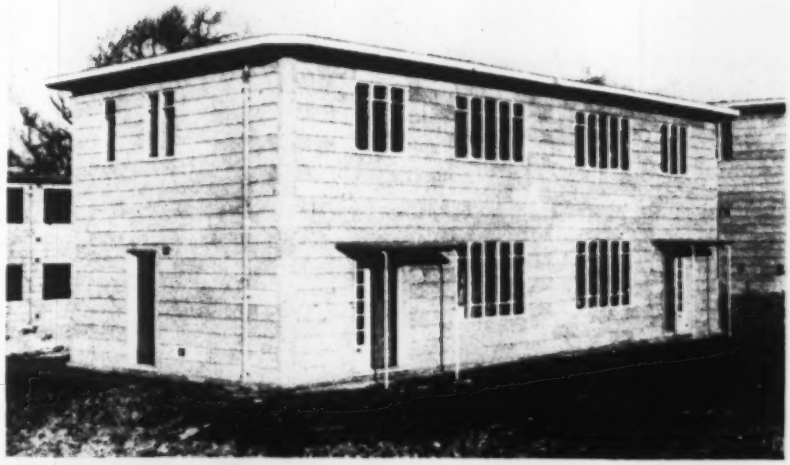
## Re-Activation . . . .

**Netherlands**—Within a year after Holland was overrun by German armies, the Koninklijk Instituut van Ingenieurs (the Royal Netherlands Institution of Engineers) was suddenly suppressed, its staff dismissed, and its premises, assets and financial resources seized. German leaders attempted to gather the Institute's



***New Rhine Bridge for Cologne**—Most famous of all Rhine cities for its bridges, Cologne has had nothing since the end of the war but bridge wreckage and an American-built Army trestle to remind it of its former glory. Now a more substantial—though still makeshift—crossing is being built by British Royal Engineers and German contractors. The new bridge consists of a central 240-ft. truss span connected to the east and west banks by shorter Bailey spans, the whole measuring 1,480 ft. in length. Mounted 50 ft. high on falsework of Bailey bridge units, the central span was floated into position on barges while the other spans were cantilevered into position. Two highway lanes, a bicycle track and sidewalks are accommodated on the deck.*

***Precast Concrete House**—The Airey system of building precast concrete houses, approved recently by the British Ministry of Health, utilizes a frame of 2¼ x 4-in. precast concrete studs, spaced 18-in. c. to c. and of one story height; concrete floor slabs, and an exterior of 9-in. wide, 3-ft. long clapboard like concrete units. Upper story studs are connected to those on lower floor by tubular dowels and bolted to floor or roof beams. The posts, serving as mullions for 18-in. metal windows, are continuous through the window openings. Secured to the studs with copper wire looped around hooks imbedded in the inner face of the slabs, the exterior facing is laid dry, but bitumen is used where the facing contacts the posts. The interior of the house is faced with plasterboard placed over glass-fiber insulation.*



4,500 members into a new organization—the "Netherlands Institute"—with little success.

But in May, 1945, after a four-year blackout, the Institute reconstituted itself, almost without waiting for the final German surrender. In a recent report, Wouter Cool, secretary-general, said that old members have rejoined in large numbers, and the organization's building was not severely damaged. However, many of its technical books were destroyed—some having been used for fuel.

**China**—Yellow River dikes in Honan cannot be repaired completely before the summer rainy season, although enough can be accomplished to "restrict" flood areas, according to government officials. Reconstruction work under the UNRRA program is being supervised by Oliver J. Todd, an American engineer with long experience on flood control in China.

**Mexico**—Design of the Hermosillo Irrigation system are being completed and bids will be called for soon by the Junta Local de Irrigacion del Estado de Sonora. The system will bring 120,000 acres under irrigation.

**Poland**—Although about 75 percent of Warsaw was destroyed in the great battles of World War II, the city will be rebuilt on its former site, according to the Warsaw Reconstruction Board.

Plans are being prepared for reconstructing the Polish capital along functional lines—considering the city as a region of about 700 sq. mi., divided into specialized sections for business, residential and recreational activities. A road net will traverse the region (roughly paralleling the Vistula River) and will provide both a "greenbelt" and a "Broadway" by a synthesis of two not-quite-overlapping road systems.

Szymour Sykus, associate director of the reconstruction board, and his wife—an architect—are now in the United States studying American practice for possible incorporation into the overall plan for reconstruction of the city as Poland's greatest metropolis.

## *Highways . . . .*

**India**—Responsibility for completing construction of 18,000 miles of national highways over the next 10 to 15 years at a capital cost of more than $200,000,000, has been accepted by the Indian Government. If the legislature and the various provincial authorities agree to this assumption of responsibility, the central government will put its plans into effect by April 1, 1947.

Annual maintenance of the highways, also to be assumed by the central government, would run between $6,000,000 and $7,500,000 a year. Of the total mileage, about 15,000 miles would be in British India, and the remainder in native states.

To implement the program, a recent meeting of the government's Standing Committee for Roads proposed establishment of a central road-research organization, and formation of a pool for obtaining, repairing and distributing roadbuilding machinery to the various governmental subdivisions that will participate in the highway program.

## Labor adjustments concern industry

Labor controversies during the past week continued to affect the construction industry, and manufacturers, contractors, and union officials sought agreements which in most cases provided for substantial raises in pay to labor.

Two such raises were approved—one at St. Louis, Mo., where the National Wage Stabilization Board approved an increase of 17 cents per hour for the 4,500 carpenters affiliated with the AFL Brotherhood of Carpenters and Joiners in the St. Louis area. The increase, retroactive to June 1, raised carpenters' rates from $1.70 per hour to $1.87.

The other agreement was concluded by the Associated General Contractors' Southern California chapter, which announced that as of June 3 its negotiating committee, acting with the chapter at San Diego and a committee of the Building Contractors Association of California, completed negotiations for renewing a master labor agreement. The agreement grants blanket wage increases of 15 cents per hour for laborers, carpenters, cement finishers, reinforcing iron workers, truck drivers and operating engineers. Recommendations have been forwarded to chapter membership, and then will be sen. to Washington for approved by the WSB.

In Minneapolis, Minn., Mayor Hubert H. Humphrey entered a controversy between a cabinet makers and millmen's union and manufacturers of sash and door products, in an attempt to avert a strike which he said would seriously delay the city's housing construction program. Mill workers had asked a 25 cent an hour wage increase, but scaled the request down to 15 cents.

#### Concrete block plant troubles

Legal action against a union was sought by the Crumb-Colton Co. and nine employees of its cement block manufacturing plant at Springfield, Ill. The complaint alleges that the company has been prevented from obtaining sand and gravel needed for the manufacture of its product by refusal of three AFL unions to permit truck drivers to deliver sand to the plant or to obtain sand for delivery.

The 12th Regional Wage Stabilization Board at Seattle, Wash., announced that nine building and construction firms in Washington and Oregon have been penalized a total of $15,159 in income tax disallowances for payment of unapproved wage rates in violation of stabilization regulations. The agency said that its findings were based for the most part on wartime violations, and that the employers voluntarily admitted violations, and have cut their wages back to legal rates.

Cement workers in four Western Washington plants returned to work June 3, ending a strike that had tied up plants in Seattle, Bellingham, Concrete and Grotto. The union won a 17½ cent an hour wage increase and other concessions, retroactive to May 1.

## D. C. water department makes personnel changes

David V. Auld will become superintendent of the District of Columbia Water Department when Humphrey Beckett, present head, retires on June 30, district commissioners have announced.

David V. Auld

Mr. Auld has been assistant superintendent of the department since September, 1942. During the war he was Director of War Public Works Projects for the District of Columbia simultaneously with his job in the Water Division.

Auld's first job for the district was as a sewer division field worker in 1926. In 1940, as a senior engineer, he was put in charge of the district's six-million-dollar PWA sewer program. In 1941 he became acting director of all PWA projects for the district and assistant chief of the water department a year later.

Auld's successor will be Roy L. Orndorff, now engineer of design and construction. Orndorff joined the district's sewer division in 1923 and switched to the water department in 1937. Beckett, who has been in district service for 51 years, will be 68 on July 1. He went to the district highway department in 1895. After service in Cuba in the Spanish-American War and in the Philippine insurrection, he returned to the District in 1901, working in the field for the water department.

Roy L. Orndorff

He advanced through all grades, becoming engineer in charge of construction in 1916, assistant superintendent in 1930 and superintendent in 1941.

## FPC approves 1,200-mi. gas pipeline construction

A natural gas pipeline project to cost about $70,000,000 was given the go-ahead June 7, when the federal power commission authorized construction and operation in answer to a joint request by the El Paso (Texas) Natural Gas Co., the Southern California Gas Co., and the Southern Counties Gas Co. of California. Included in the work will be three purification and dehydration plants, one gas dehydration plant, and a compressor station.

Of the 1,200 miles of line to be installed, 737 miles will be a 26-in. line extending from Eunice, N. M., to Blythe, Calif., and a 251-mi. 24-in. transmission line will connect Dumas, Texas, with the Eunice plant. These will be handled by the El Paso Co., which will spend an estimated $53,800,000 as its part of the project. The California gas companies, both subsidiaries of Pacific Lighting Corp., will build 214 miles of 30-in. line from Blythe to Santa Fe Springs, near Los Angeles. This line is the largest diameter gas pipeline to be authorized to date by FPC, and will have a daily capacity of 305,000 mcf. It is designed to act as a storage line when peak delivery is reached in 1950, and will require a 10,000-hp. compressor station to be built near Blythe. Total outlay for the California facilities is expected to reach $16,225,000.

Schedules call for first delivery of gas to the Blythe terminus in California by June of 1947.

## Concrete lab moves to Clinton, Mississippi

The central concrete laboratory of the North Atlantic Division, Corps of Engineers, U. S. Army, at Mount Vernon, N. Y., is to be deactivated this month to permit the transfer of the key personnel and equipment to Clinton, Miss., where a new laboratory is to be created as a division of the U. S. Waterways Experiment Station, Vicksburg, Miss.

The new laboratory will be known as the Concrete Research Division of the U. S. Waterways Experiment Station, and will be headed by Charles E. Wuerpel, who is now engineer in charge of the Central Concrete Laboratory. The purpose of the new laboratory will be to perform all research work on cement, concrete and materials related to concrete construction required by the U. S. Engineer Department. A further purpose of the laboratory will be to provide adequate facilities for the investigation of problems related to concrete to be placed in specific structures.

# New England traffic officials consider parking, urban traffic snarl problems

***Third annual traffic engineering conference hears discussions on needs for off-street parking, highway safety and other matters***

The ever-increasing problem of finding parking space for vehicles in the crowded business districts of large communities without creating additional blocks to through traffic engaged the attention of more than 200 engineers and highway officials attending the third annual New England Traffic Engineering Conference at Cambridge, Mass.

Held June 11, 12 and 13 at the Massachusetts Institute of Technology, the meeting attracted representatives of the six New England states, and New York, New Jersey, Pennsylvania, North Carolina, Michigan, Virginia and the District of Columbia. Charles B. Breed, professor of civil engineering at M.I.T., in opening the conference, stressed the need for an engineering approach to traffic studies.

Nathan Cherniak, economist for the Port of New York Authority, told members that increasing individual and mass transportation to urban centers calls for the establishment of off-street parking facilities, and warned that parking and loading space ordinances should be drawn up only after study by traffic engineers and city planning agencies. Greater utilization of one-way streets, greater attention to traffic signal operation, and comprehensive studies of all factors affecting urban traffic were also urged in papers presented by Robert Mitchell, Philadelphia city traffic engineer; Lloyd Braff, staff engineer for De-Leuw-Cather Co.; Harold F. Hammond, manager, Washington office, American Transit Association, and Peter Hall, city planning engineer for New Haven, Conn.

#### Protecting pedestrians

The protection of pedestrians on major highways can be advanced effectively only through education, according to T. M. Matson, director of the Yale Bureau of Highway Traffic. He pointed out that 4 out of 10 highway fatalities in the United States involve pedestrians; that the majority of those killed are over 40 years of age, and that the accidents occur in darkness or near darkness and generally in the winter months.

"These fatalities are linked to the lack of time-space sense on the part of many pedestrians," Mr. Matson said. "Pedestrians must be impressed with the requirement—long accepted by the driver—of being able to see at least 200 ft.; restrictions on pedestrian traffic should be enforced; better lighting is strongly to be recommended. Crossings where a pedestrian must negotiate more than two one-way lanes without 'islands' or breaks should be looked into.

#### Speed studies

Connecticut's studies of speeds in particular traffic zones, the precautions resulting from which have been put into effect during the last ten years, have been largely responsible for the state's enviable record of decrease in accidents, according to W. H. Sharp, engineer of highway control, Connecticut State Highway Department.

Others of the more than 20 papers presented included discussions of organization of traffic control agencies, planning for through arterial lanes in urban locations, and a lengthy discussion of plans for alleviating Boston's traffic difficulties. John B. Wilbur, acting head of the Department of Civil Engineering, M.I.T., presided at general sessions.

## Survey to be made for Irondequoit Bay widening

Prospects that the outlet of Irondequoit Bay, on Lake Ontario near Rochester, N. Y., will finally be widened a quarter of a mile and deepened so that all lake liners can enter seemed improved since the House Rivers and Harbors Committee has authorized a survey by U. S. Army Engineers "to determine the advisability of a project."

A largely-signed petition asking that the outlet be deepened and widened has been sent to Washington by local proponents of the improvement. Many consider the bay the logical location for the harbor of Rochester.

## Tramway contract let

Contracts for the world's longest aerial passenger tramway were let May 29 by the San Jacinto Mountain Park Authority, Calif., to the Consolidated Steel Corp.

The company, associated with Morrison-Knudsen Co. and the American Steel & Wire Co., will erect a 12,400-ft. structure from the desert floor to the top of the 8,500-ft. Mt. San Jacinto. (*ENR* Feb. 7, vol. p. 233).

Acme Newspictures photo

***Start New York Housing Project Construction—While clearing of the 67-acre former slum area continues, contractors have started foundations for the first of 35 13-story apartment buildings that will form the Metropolitan Life Insurance Co.'s $30,000,000 housing development in New York's East Side "gas-house" district. To be known as "Stuyvesant Town", the development is being built under general contract by Starrett Bros. and Eken. The more than 40,000 piles to support the buildings are being driven by the Western Concrete Pile Co., and foundations installed by Arthur A. Johnson Corp.***

# CAA sets up engineering staff for new $500,000,000 airport program

***Names men to supervise vast program of expansion of air facilities approved in recent congressional action***

Charged with the administration of a program that will see the expenditure of a billion dollars during the next seven years on airports and airport facilities, the Civil Aeronautics Administration last week made public its organization for overseeing the work.

The bill, signed last month (*ENR* May 16, vol. p. 763) authorizes but does not appropriate $500,000,000 in federal aid to states and local groups for airport construction. When combined with local matching funds, the total will be a billion dollars.

The organization that will handle this work is shown on the chart at the bottom of this page. "Thumbnail" sketches of its members follow:

**Theodore P. Wright,** Administrator of Civil Aeronautics, is an outstanding figure in both American and world aviation.

He has held his post since September, 1944; has been a member of the Aircraft Production Board and director of the Aircraft Resources Control Office; and his technical contributions as an aeronautical engineer and executive have included development of the airplane which won the $100,000 award in the Guggenheim safe aircraft competition of 1930.

Abroad he is well known for his work as technical secretary of the International Civil Aviation Conference in Chicago in November, 1944; and for his participation in the U. S. strategic bombing survey of the bombing work of the U. S. Eighth Air Force in Europe. He has written many articles and papers ranging from aeronautical research, aero-dynamics, airplane design and production to a discussion of aviation's place in civilization.

He served as a lieutenant with the U. S. Naval Reserve Flying Corps from 1917 to 1921. A graduate of the Massachusetts Institute of Technology, between wars Doctor Wright was an aeronautical engineer, plant manager and executive of the Curtiss-Wright Corp., having attained the post of vice-president and director of engineering.

**Theodore P. Wright**

**Charles B. Donaldson,** since 1945 assistant administrator for airports, served in the first world war on military construction in Puerto Rico. Later he was in railroad civil engineering in Central America and the U. S. After considerable flying experience, he joined the Bureau of Air Commerce, Department of Commerce, in 1936, advancing to chief engineer of the Airport Division of the CAA in 1939 and Director of Airports in 1941.

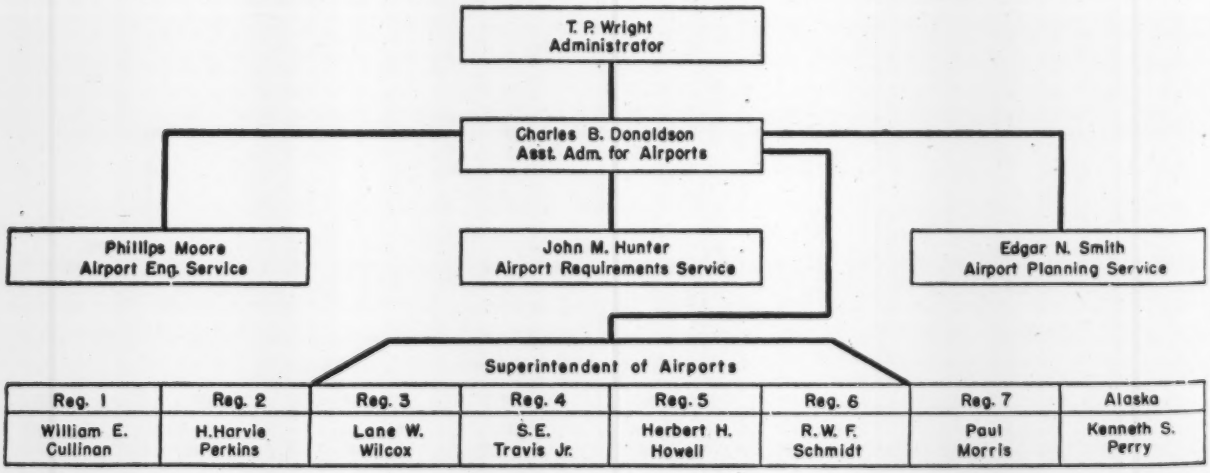
**John M. Hunter, Jr.,** director, Airport Requirements Service, a Harvard graduate and a lawyer, has been associated with the Office of Airports of CAA and predecessor agencies since 1936, in work of a legal-administrative nature.

**Phillips Moore,** director Airport Engineering Service. Before assuming his duties in Washington in 1942, he was district airport engineer for Georgia, Alabama, Mississippi and Florida for eight years. He was connected with the Georgia State Highway Department for three years on highway surveys and construction, and has had extensive civil engineering experience.

**Edgar N. Smith,** director, Airport Planning Division, went to CAA as airport planning consultant in 1944. A graduate of Columbia, he was a civil engineer on various New York City projects in 1923-1938.

**William E. Cullinan, Jr.,** superintendent of airports, Region 1, is a graduate of M.I.T. In 1943 he became district airport engineer for CAA for N.Y. State and New Jersey, and in February, 1945, became airport engineer for the state of New York. In 1945 he was appointed director of the N. Y. State Bureau of Aviation, resigning May 15 to take his present position.

**ORGANIZATION SET-UP FOR SUPERVISION OF AIRPORT EXPANSION PROGRAM**



**H. Harvie Perkins,** superintendent of airports, Region II, is a B.S. graduate of Georgia Tech in civil engineering. For two years he was a field engineer on subway construction in New York City. In 1934 he joined the Bureau of Air Commerce. He had a year and a half with Federal Airways Service and 10 years with the Office of Airports.

**Lane W. Wilcox,** superintendent of airports, Region III, a graduate of University of North Dakota with a bachelor of science degree in mining engineering, 1933, after highway work and work on Boulder Dam and the Chicago subway, joined the CAA in October, 1938. He was appointed superintendent of the Airport Branch at Chicago last April.

**S. E. Travis, Jr.,** superintendent of airports, Region IV. After graduation from Mississippi College with a B.S. degree in 1917, he served in the Army and after discharge took graduate work at M.I.T. He went into a manufacturing business in Hattiesburg, Miss., until 1933 when he was employed by the Aeronautics Branch of the Department of Commerce, as assistant district airport advisor for Mississippi.

**Herbert H. Howell,** superintendent of airports Region V. He attended Washington University at St. Louis, Mo. In 1930 he was associated with Charles S. Russell, consulting airport engineer, in Oklahoma City in the design of several projected airports in Oklahoma, and was employed by Oklahoma City on the original plans for Will Rogers field. In 1940 he joined the CAA as district airport engineer at Denver, Colo., advancing to his present position in 1944.

**R. W. F. Schmidt,** superintendent of airports, Region VI., after attending Iowa State College and working for the Iowa Highway Commission during 1927-28, became field engineer for Curtiss-Wright in Chicago in April, 1928. He later worked for Goodyear Tire and Rubber Co., and as airport engineer and consultant for United Air Lines. He joined the CAA in September, 1938, at San Francisco and became superintendent of airports in May, 1942.

**Paul Morris,** superintendent of airports, Region VII, was graduated in civil engineering at the Univeristy of Maryland, 1925. He later was in the engineering department of Miami, Fla., and for two years worked with the U. S. Army Engineers. In 1930 he went with the Bureau of Light Houses, airways engineering, staying till 1935, when he transferred to the airports branch of the CAA. During the war he was regional administrator for Region VII, CAA.

## Waukesha water employees to share profits

Probably the only municipal employee profit-sharing plan in the country was declared legal recently by the Wisconsin Public Service Commission.

The American Municipal Association reports that the Waukesha, Wis., water utility program for sharing a portion of the profits of the municipal utility with its employees was held to be valid by the state commission because of Wisconsin legislation which enables a public utility to share its profits with its customers or employees.

The unusual position of the water utility—operating virtually independently of the city council—allowed adoption of the plan without complications that might arise if such profit sharing were attempted by a city agency elsewhere.

In effect, the profit sharing plan boosts pay of water utility employees by from 3.6 percent for highest paid employees to about 8 percent for lower-paid personnel. The plan provides that no employee receive more than $200 annually of the surplus profits.

## Grace Memorial Bridge reconstruction finished

A Bailey span which has served to fill a gap made in the John P. Grace Memorial bridge, crossing the Cooper River at Charleston, S. C., since February, when a drifting ship smashed into it (*ENR* April 11, Vol. p. 517), was removed on June 7.

Traffic was halted from 6 a.m. to 4:30 p.m. while the span was removed and the final section of replaced roadway put in place.

Concrete pilings and caps on which a temporary steel support for the Bailey bridge rested will be left in place if the War Department approves. The work was done by the Tidewater Construction Corp., of Norfolk, Va.

The bridge will be freed of toll July 1, having been purchased by the South Carolina State Highway Department from Charleston County.

**Kenneth S. Perry,** supervisor of airports for Alaska, in the first world war enlisted in the aviation section of the Signal Corps. He was graduated a civil engineer at Oregon State in 1925, and served as senior engineer and supervisor of operations with the Oregon state office of WPA and coordinator of airport construction with CAA until 1940, when he became CAA airport engineer in Region VII, Seattle, Wash.

## OPA boosts ceilings on brick, tile and lath

Ceiling prices for common and unglazed face clay building brick and structural clay tile produced in New Jersey were increased by the Office of Price Administration on June 7. The maximum price for standard size brick is advanced $1.75 per thousand and the adjustment for structural clay tile amounts to $1.90 per ton.

Increases averaging 11.4 per cent over October 1941 prices for certain metal plaster bases and metal plastering accessories were announced June 9.

The new prices went into effect June 10, 1946. The increases range from 1.9 per cent on a particular type of bull-nose bead to 22.8 per cent for a particular type of 3.4 pound metal lath. The need in the Veterans' Emergency Housing program and the cost increases by items were the criteria for apportioning the rate of increase. Four general types of mesh or rib metal lath, two of sheet lath and two of stucco mesh are covered by the action.

Plans to provide a substantial increase in the production of wire nails, vitally needed for the Veterans' Housing Program and other essential projects, were discussed by the Civilian Production Administration with the newly formed Wire Products Industry Advisory Committee at a recent meeting, CPA said. This action was initiated at the request of Wilson W. Wyatt, National Housing Expediter.

## U. S. Chamber seeks split of housing functions

Complete separation of housing agencies of the Federal Government concerned with credit from those having to do with welfare was urged last week by the Chamber of Commerce of the United States.

George W. West, chairman of the chamber's construction and civic development department committee, told a Congressional committee:

"We do not believe that either the welfare activities of the federal government or those activities designed to strengthen private home financing facilities will benefit by the continuance of this union" He added, "To merge these completely distinct functions, as done by the President's Reorganization Plan No. 1, will mean that either sound and reasonable principles of credit will be weakened by diverting them to uses of charity or, on the other hand, that the principles of welfare where they properly apply will be restricted to the point of view of a mortgage credit operation."

# Western highway officials seek change in state road bureau organization

## *Adequate salary scales also recommended by WASHO to attract and retain high caliber employees in highway work*

Reorganization of state highway departments—including adequate salary scales—to attract high caliber employees as well as to hold the well-equipped technical men now employed by the departments was urged at the annual meeting of the Western Association of State Highway Officials held at Salt Lake City, Utah, June 10-12. The subject of departmental reorganizations and pay increases was covered in addresses given the group by both L. S. Tuttle, administrative assistant to the commissioner of the Public Roads Administration, and Hal H. Hale, executive secretary of the American Association of State Highway Officials.

Mr. Tuttle stated that percentage pay boosts from prewar salaries in accordance with cost-of-living increases is not adequate because, in general, prewar highway department salaries were low. Mr. Hale suggested that an integrated compensation and classification plan for state highway employees would help ease the personnel shortage, which is one phase of the gloomy situation the highway groups face. Mr. Hale predicted that further government restrictions, such as those imposed by the Civilian Production Administration, will further impede the progress of the postwar program of highway building.

### *Higher costs cut program*

Two panel discussions were held. L. I. Hewes, chief, Western Division, Public Roads Administration, San Francisco, led discussion of the Federal Aid Highway Act of 1944.

R. W. McLeese, chief engineer, Utah State Road Commission, pointed out in this discussion that funds provided by the 1944 act were now inadequate for current programs due to cost increases. He stated that with the moneys provided by this act each year it would take 10 years to bring the secondary highway system up to standard, 25 years for the primary system and more than 35 years to complete the urban highway program.

The forest highway system was the cause of much comment. The Forest Service was condemned for its policy of building roads to carry heavy logging loads in the national forests, a policy that results in the delivery of excessive loads to roads of lesser design in state highway systems. A. L. Anderson, division engineer, U. S. Forest Service, Ogden, Utah, stated that the service was willing to cooperate and that he would pass on the recommendations of the highway officials to the forest service chief.

### *PRA contract rejections*

J. S. Bright, chief, construction division, Public Roads Administration, Washington, D. C., outlined the relationship of the PRA with the OPA and the reasons for rejecting contracts in cases requiring PRA approval where price increases were too great. He explained that the OPA was willing to leave price control on highway contracts up to the PRA and the state highway departments. The following tabulation concerning the contracts awarded and rejected from January 1946 to May 1946, was given:

| Status | No. of Contracts | Value Millions of Dollars |
|---|---|---|
| Awarded | 1,230 | 185.9 |
| Rejected by states | 329 | 49.6 |
| Rejected by PRA | 56 | 8.1 |
| Pending | 68 | 12.6 |

The above tabulation is for the entire United States. A similar tabulation was offered indicating like conditions in the twelve western states.

***Attend Highway Session**—Active at the meeting of the Western Association of State Highway Officials in Salt Lake City, Utah, were P. G. Poore (left), road engineer, Montana State Highway Department, acting president of the association, and L. S. Tuttle, administrative assistant to the commissioner of the Public Roads Administration.*

The second panel was led by Fred J. Grumm, assistant chief engineer, California Division of Highways, and dealt primarily with problems of design and safety. The group paid particular attention to standards for secondary highways because the western state governors, in a conference at Cheyenne, Wyo., last November, passed a resolution indicating that they thought the secondary standards were too high and requesting the highway officials to recommend changes to the PRA.

After a review of the secondary road standards of all states represented, it was determined that the highway departments were in unanimous agreement that reductions should not be made in the current standards.

### *Salary increases favored*

Among the resolutions passed was one urging salary increases for state highway departments in order to attract and retain personnel by matching the compensation offered by private industry and other public agencies.

A second resolution recommended the purchase of access rights in addition to the purchase of right-of-way when acquiring property for federal aid routes and other important highways. In states where legislation does not exist permitting such purchase, it was recommended that enabling legislation be enacted.

A third resolution condemned the practice of the Reclamation Bureau, the Army Engineers, and other federal agencies of merely replacing highway facilities in kind when they find it necessary to relocate highways. It was recommended that such agencies be authorized by Congress to assume not only the cost of replacing highway facilities in kind but, also, to assume the additional cost of building to the standards that the amount and character of traffic requires.

### *Officers elected*

A. F. Winkler, chairman, Montana State Highway Commission, was elected president of the group for the ensuing year. T. Matt Hally, chief engineer, Idaho Bureau of Highways, was elected vice-president, and E. V. Miller, engineer of plans and surveys, Arizona Highway Department, was elected secretary-treasurer. The following were renamed to the executive committee: T. W. Holman, chairman, Washington State Highway Commission; Robert A. Allen, chief engineer, Nevada State Highway Department; and J. R. Bromley, chief engineer, Wyoming State Highway Department.

Division and district engineers of the PRA attending the WASHO meeting also met with other PRA officials on June 7 and 8 in Ogden, Utah, and on June 12 in Salt Lake City.

# California sewage disposal discussed

A forum for exchange of information about modern sewage disposal was held June 9, 10 and 11 at Monterey by the California Sewage Works Association at an annual convention, which drew a record attendance of 191.

Two days of technical sessions started with a chemists' round table breakfast discussion. Three topics at one session were reports on research and experimental work on sewer pipe jointing, sulphide control and elimination of hydrogen sulphide in sewers. Other sessions focused attention on subjects ranging from safeguarding the purity of underground waters to the effect of kitchen garbage grinders on treatment plants.

Underground storage basins near Los Angeles were described by Arthur G. Pickett, deputy county surveyor, Los Angeles County, who said storage in the first 100-ft. depth of these basins totals 3,689,000 acre-ft. or the equivalent of surface reservoir storage worth $110,000,000 at current dam costs. To emphasize the importance of protecting these underground basins from pollution he cited the case of eleven wells put out of operation, some of them permanently, by small quantities of phenolic waste discharged through city sewers and sewage treatment plant, by a factory some 15 mi. away.

#### Operation problems aired

In describing grease problems, J. H. Van Norman, chief operator at the Hyperion plant, reported as much as 15 tons of slaughter house grease received at the plant in 4 to 5 hr. This plant ordinarily removes 30 to 35 cu. yd. of screenings per day for incineration. Citations of other emergency shock loads included 2 to 4 tons of cabbage leaves per day at one plant and at another as much as 6 tons per day of ground peach pits.

Highly gratifying results with DDT for filling flies and fly larva in screenings were reported. Several papers reported successful results in Los Angeles County with "Cloroben" in controlling odors and formation of hydrogen sulphide in sewers, as well as in reducing bacterial count. One of these papers, by Reuben F. Brown, superintendent of sewer maintenance and operation, Los Angeles, which brought out differences of opinions in interpretation of results, will be abstracted in a later issue.

In discussions on sewage plant operation prominence was given to the difficulties of grinding or shredding wet rags. One operator reported taking a ton of rags per day from a 60-mgd. flow. The consensus was that if rags can be removed they should be dried and burned. A favored plan for rag removal was that of placing in the sewage stream a rack holding inclined pegs or hooks, on which the incoming rags would catch for removal at intervals by an upstream drag.

Industrial representatives called attention to the contradictory attitude of cities which try to encourage industrial development in their communities on the one hand and on the other hand impose serious and often questionable restrictions on industry in the matter of waste disposal.

Officers of the California Sewage Works Assn. elected for the ensuing year were as follows: President, G. A. Parkes, civil engineer, city engineer's office, Los Angeles; secretary-treasurer, A. G. Pickett; and new director, Blair I. Burnson, sanitary engineer, East Bay Municipal Utility District.

### SPENDING FOR HOUSING APPROVED

Even though individuals may be benefited, Massachusetts cities and towns may legally spend public funds for temporary and permanent housing for veterans, the state Supreme Court ruled recently.

In an opinion handed down at the request of the state legislature, the high court held that municipal expenditures for veterans' housing is "at a public purpose, even though individuals as such may profit thereby." The court added that municipalities may recognize services rendered to the state and nation by veterans, and raising public funds to effectuate such a purpose is constitutional.

## Seattle pontoon bridge traffic over estimates

Because travel across the Lake Washington concrete pontoon bridge at Seattle, Wash., (*ENR* July 11, 1940, vol. p. 58) continues to exceed all estimates, tolls may be removed as early as 1952, the Washington State Highway Department has announced.

The new estimated maturity date is the fourth to be established since construction of the bridge six years ago. At the time the bridge was opened, 1968 was set as the date for retirement of $5,900,000 bonded indebtedness.

Tolls collected in 1945 totaled $755,179, compared with $596,320 in 1944, State Auditor Cliff Yelle reported recently. The bridge was used in 1945 by 221,896 trucks, 2,010,214 automobiles and drivers, 50,541 buses and 2,262,052 extra passengers.

Tolls collected so far this year are considerably in excess of those for the same period of last year.

## Senate approves VA work to cost $441,250,000

The third deficiency bill (H. R. 6601) authorizing the Veterans' Administration to enter into hospital construction contracts to the amount of $441,250,000 was passed by the Senate June 14. The measure had been approved by the House May 29 (*ENR*, June 6, vol. p. 893).

A deficiency bill (H. R. 4805) containing $158,320,000 for the hospital program of the Veterans Administration was passed late last year (*ENR* Dec. 7, 1945, vol. p. 751). This law made available a total of $331,452,814 for hospital work by the agency. The bill just passed would increase the contractural authority for hospital construction to a total of $772,702,814.

The Senate also agreed that the agency could spend up to 10 percent on administrative costs.

The Senate concurred with the House regarding a $35,000,000 appropriation for the Bureau of Community Facilities for assistance to local public works groups for planning of engineering projects. The bureau had requested $50,000,000 but the House saw fit to provide only $35,000,000. A Senate appropriations committee in reporting out the bill further reduced this fund to $10,000,000 but the Senate approved $35,000,000.

The Bureau of Community Facilities reports that as of May 31, about $26,000,000 of the previous appropriations, which totaled $30,000,000, had been allocated to local groups for the planning of projects expected to cost about $1.1 billions. It is anticipated that the new appropriation of $35,000,000 will be used in the planning of more than $1.1 billions of additional work.

#### Plan two new hospitals

Army Engineers have been authorized to start work immediately on plans for two new Veterans Administration hospitals, to be located at Kansas City, Mo., and Omaha, Neb. The engineers have also been asked by VA to conduct subsurface explorations of a proposed site for a 1,248-bed general hospital at Pittsburgh, Pa.

At Kansas City, a 495-bed general medical and surgical hospital, and a 250-bed tuberculosis hospital will be built on the same site, at a cost of about $6,223,000. The Omaha hospital, which will be a general medical and surgical establishment, will cost about $3,976,000.

---

**Springfield, Ill.**—A hearing was held by the U. S. Army Engineers recently on the proposed $91,000,000 flood control program for the Illinois River valley.

# MEN AND JOBS

The appointment of **F. E. Votaw,** to be district engineer in charge of the Boston, Mass., office of the Portland Cement Association, has been announced. He has been chief field engineer of the association in the Boston area since 1941.

**Benjamin J. Storey,** St. Paul, Minn., has been named by the Minneapolis-St. Paul Sanitary District as assistant engineer of the sewage disposal plant at Pig's Eye Island. Storey, plant operator for many years, succeeds **Warren Sleeger** who resigned.

**S. P. Howell** of Atlanta, Ga.. is resident engineer for the Civil Aeronautics Administration on a $410,000 expansion program involving the Burlington, N. C., municipal airport. **N. L. Coiner** is supervising the grading and surface base and **A. N. Evans** is in charge of surveys.

**Robert L. Miller,** civil engineer formerly with the Racine, Wis., Construction Co., has organized the Miller Construction Co. at 1216 W. Capitol Dr., Milwaukee.

**H. A. Lyons,** deputy minister, **Harold Lloyd,** bridge engineer, **Allan Findlay,** right of way engineer, **V. H. C. Campbell,** district engineer at La Pas, and **F. A. W. MacLean,** district engineer at Winnipeg, of the Department of Public Works of Manitoba, have retired.

**George Bottcher,** graduate of Cornell University, has been appointed construction engineer for the Allegheny Ludlum Steel Corp. at Brackenridge, Pa.

**Robert M. Belt,** acting director of the territorial department of public works, Honolulu, T. H., recently received the Navy commendation ribbon for his work as assistant supervisor of the construction program of the 14th Naval district. Belt, formerly lieut. commander of the civil engineer corps, USNR, was awarded the citation by Secretary of the Navy James Forrestal for "outstanding performance of duty as assistant to the district public works officer" and his outstanding contributions to expansion of public works.

**Edwin R. Burke** of the Ohio state highway department has been appointed deputy engineer of Wood County.

**J. M. Orman,** former engineer in the city plan department of Dallas, Tex., has been made assistant city plan engineer. He succeeds **Charles W. Ford** who was recently made assistant city manager of the city of Dallas.

**Don S. Wilson** has been named engineer for Redwood City, Calif. He was graduated from Iowa State College at Ames. He joined the San Mateo County engineer staff in August 1940.

**George Schilling,** acting Sparks City, Nev., engineer during the war years, left city work May 18 to enter private construction business.

**Harry O. Carter** and **Fred W. Carter** of Raleigh, N. C., and **David G. Satterfield** of Clayton, N. C., have formed a general contracting firm at Raleigh to be known as Capital Builders.

**Malcolm Pirnie** has announced formation of a partnership with his associates, **Ernest W. Whitlock, Robert W. Sawyer, C. G. Werner Jr.,** and **Richard Hazen** under the name of Malcolm Pirnie Engineers, with offices at 25 West 43rd St., New York City.

**James S. Anderson** is now building commissioner and engineer of Wilmette, Ill. Previously he was with Harland Bartholomew & Associates, St. Louis, Mo., city plan specialists.

*Clyde H. Spencer, right, Bureau of Reclamation construction engineer in charge of the Deschutes project, and Goodrich W. Lineweaver, director of the operation and maintenance branch, collaborate to open gates that will supply initial irrigation water to 50,000 acres near Madras, on the east side of the Deschutes River in central Oregon.*

*Until recently district engineer for the U. S. Army at Los Angeles, Calif., Col. Rufus W. Putnam is now head of the Los Angeles office for Kaiser Engineers, Inc. Heading the Los Angeles USED during its peak wartime activities, Colonel Putnam saw work passing through his office at the rate of about $30,000,000 per month.*

*Highway engineers from 16 Latin American republics, China, India and Egypt form up for a group photograph while inspecting a cut on U. S. No. 1 "The Dixie Highway", between Washington, D. C., and Richmond, Va. At the apex of the V are (left to right): Baxter Smith, highway engineer for the Public Roads Administration, and Charles M. Upham, engineer-director, American Road Builders Association.*

**J. W. Coombs,** who taught engineering at Multnomah College in Portland, Ore., for more than eight years, and **Lloyd Lille,** mechanical engineer, have formed the engineering firm of James W. Coombs & Co. at Portland.

**W. G. Ure** is city engineer of Woodstock, Ont.

**John H. Bergen,** former engineering executive for the department of public works, Honolulu, T. H., was recently appointed assistant director of the department of institutions. During the war Mr. Bergen served as civil engineer for Hickam Field construction, and later was in charge of design of shore installations for the 14th Naval district until 1944, when he was named administrator of the postwar planning division of the department of public works. He is a University of Illinois graduate.

Eight officers who served with the Mississippi River Commission and the U. S. Waterways Experiment Station during the war have been cited for "meritorious services" during their assignments at Vicksburg, Miss. They are **Col. Clarence R. Birchett, Maj. E. J. Williams, Jr., Maj. V. G. Kaufman, Maj. A. B. Smith, Capt. H. G. Dewey, Capt. J. B. Tiffany, Jr., Capt. G. L. Hunt,** and **Capt. G. B. Fenwick.** Except for Captain Dewey, all have reverted to inactive duty.

**A. E. Niederhoff,** civil engineer, has resigned from the Seattle staff of The Austin Co. to become a senior engineer on design for the Naval Ordnance Testing Laboratory at Inyokern, Calif.

Four engineers at Portland, Ore., have incorporated as North Coast Engineers Inc., and are engaged in civil and mechanical engineering on several large construction projects. They are **R. B. Lewis,** president; **D. H. McGogy,** vice president; **Harry Hemperely** and **Harry R. Powell,** directors.

**Russell Yuill,** civil engineer, Truro, N. S., has been named port manager of Saint John, N. B., succeeding **Alex. Gray,** retired.

**Paul J. Neff,** of Houston, Tex., who was graduated from the University of Kansas with an engineering degree and who began his railroad career as a rodman 39 years ago, has been appointed chief executive of the Missouri Pacific Lines to succeed the late L. W. Baldwin.

**Cecil L. Longson,** Burlingame City, Calif., associated with the city engineering department for 20 years and city engineer for 10 years, has resigned. He will become associated in a civil engineering partnership with **Earl P. Wilsey,** city manager and engineer of Hillsborough and **Charles T. Broughton,** works engineer of South San Francisco.

**Robert P. Guarino,** consulting engineer, has opened engineering offices at High Point, N. C.

The San Bernardino County, Calif., board of supervisors and planning director Harold Zenz have appointed **William H. Hughes,** construction engineer, to administer a new building code affecting construction in the county's unincorporated areas. Mr. Hughes was formerly general superintendent of construction for Sears Roebuck & Co., Chicago, and a Los Angeles architectural engineer.

## Back to Civilian Activity

**Grover Clark,** first lieutenant, Corps of Engineers, of Rantoul, Ill., has joined the consulting engineering firm of Wilson and Anderson, Champaign, Ill.

**E. G. Singletary,** lieutenant commander, CEC, USNR, has rejoined the V. B. Higgins Construction Co. at Greensboro, N. C. In the Navy he supervised construction work at Dutch Harbor, Alaska, and in January, 1945, was made officer for construction of facilities in the Leyte Gulf area.

**Richard M. Nankivil,** after 32 months with the Seabees in the South Pacific, with Carter Jenkins and Charles S. Merchant has organized the engineering firm of Jenkins, Merchant and Nankivil at Springfield, Ill.

**N. P. Turner,** lieutenant colonel, Corps of Engineers, has returned to Houston, Tex., as a member of the firm of Freese, Nichols and Turner, consulting engineers. **Frank Wendell Beard,** captain, Army Sanitary Corps, is also associated with that firm.

**Albert Melniker,** recently returned from duty with the Corps of Engineers, has reopened his architectural office at 130 Bay Street, Staten Island, N. Y. C.

**C. M. Neidelman,** lieut. commander, CEC, USNR, has returned to his former position as project engineer for the Federal Public Housing Authority, assigned to the San Francisco region, in the bay area. He served as officer-in-charge of a Seabee maintenance unit in the Aleutians for seventeen months, and was technical training officer for Seabees at Camp Parks.

**J. E. Hergert,** recently released from the Air Transport Command, has been appointed assistant manager of the Mountain Pacific chapter, Associated General Contractors, at Seattle, Wash.

**Ray N. Northcut,** recently discharged from the Navy, has returned to the Portland, Ore., office of Guy F. Atkinson Co. as vice-president.

**D. A. McKinnon,** formerly a lieut. colonel, Corps of Engineers, and Montana state highway engineer before the war, has formed the D. A. McKinnon Co. at Helena to engage in building, engineering and construction.

**Roger W. Loveless,** major, Sanitary Corps, has returned to civilian life and is now a member of the firm of Alden E. Stilson and Associates, consulting engineers, with offices at Columbus, Ohio.

*Governor Arnold Williams, left, of Idaho, shakes hands with William E. Warne, assistant commission of the Bureau of Reclamation, under the thoughtful gaze of R. J. Newell, regional director at Boise, Idaho. Warne visited the Idaho capital during a series of conferences through the Pacific Northwest to discuss phases of bureau work there.*

# ENGINEERING SCHOOL NEWS

***A $2,000,000 engineering building for Wisconsin—Student veterans prefer engineering—Large registration expected at Toronto***

A $2,000,000 engineering building heads the list of new construction projects that the University of Wisconsin expects to get under way within a year. The Board of Regents recently approved allocation of nearly $10,000,000 for the first major construction program by the university in nearly a quarter of a century of its history.

The new engineering building, which will be used to bring together scattered units of the school of engineering and provide needed additional office and classroom space, will be erected on the site of the present Camp Randall trailer camp, where 191 student veterans and their wives and children now live in trailers.

Except for three self-supporting dormitory units designed to care for about 1,000 single students and 300 married veterans, all of the state appropriated funds will go for sorely needed classroom, laboratory, science research, library, and public service buildings.

By far the largest proportion of student veterans intend to become engineers according to statistics released by the Canadian Department of Veteran's Affairs. An analysis by professions of men attending prematriculation courses shows that 44.1 percent are training with an engineering career in mind—next on the list is commerce with 7.2 percent. Journalism appeals to 3.0 percent, arts degree 6.0—teaching 4.7—medicine 4.1—junior matriculation and dentistry each 3.6—optometry 3.0—social service and law 2.4, library service 1.2 percent.

The school of engineering is the overwhelming choice of veterans at Alabama Polytechnic Institute, Auburn, Ala., this quarter, according to a report by P. M. Norton, co-ordinator of veterans' affairs. Mr. Norton revealed that of the 2,443 veterans enrolled 969 chose engineering. The school receiving the next highest number of enrollees from the ranks of the veterans was science and literature with 569.

Lewis H. Kessler, professor of civil engineering at the University of Wisconsin, will go to the Northwestern Technological Institute, Northwestern University, as professor of sanitary engineering beginning with the fall semester. A graduate of Wisconsin, he was appointed an assistant professor in 1927 and associate professor in 1937. Prof. Kessler has accepted a summer appointment as consultant to the repairs and utilities division of the War Department.

William G. Van Note, assistant director of the Engineering Research Division at North Carolina State College, Raleigh, N. C., has been named director of the division. The post has been vacant since 1941 when the late Harry Tucker was granted a leave of absence to serve as a member of the North Carolina State Utilities Commission. Since then the division has been under the direction of the office of the dean of the engineering school.

One hundred thousand dollars worth of building work is now in progress at the Ajax Division of the Faculty of Applied Science and Engineering of the University of Toronto, to accommodate the increased registration expected next fall. This new division, set up in a converted munitions plant 23 miles east of Toronto, at present accommodates the first year group of engineering students numbering almost 1,500 as compared with the usual first year enrollment of 300. Starting in September next, both first and second year students will be accommodated at "Ajax", the total number anticipated being at least double the present total. Ten more buildings of the munitions plant, formerly occupied by men workers of Defense Industries Limited, operators of the plant, are to be converted into suitable student accommodations.

Col. John A. Hoag, commanding officer of Ft. Oglethorpe, is to join the faculty of Vanderbilt University, Nashville, as assistant professor of civil engineering, in September, Engineering Dean Fred J. Lewis announced. Colonel Hoag, native of New York, is a graduate of Columbia University. He served in France during World War I, and was stationed in Puerto Rico and in Europe and Washington during World War 2.

The Royal Canadian School of Military Engineering has recently been established at Chiliwack, B. C., under the command of Lieut. Col. C. N. Mitchell for the training of personnel for service with the Royal Canadian Engineers. The school is established in the camp used throughout the war as one of Canada's main army engineering training centers. The school will compile a history of the Corps of Royal Canadian Engineers in the Second World War and has issued an appeal for information. The school also proposes to publish a journal.

***Northwest Members of S.P.E.E.**—In Seattle recently for a meeting at the University of Washington, members of the Northwest Division of the Society for the Promotion of Engineering Education pose for cameraman: Front row, left to right: Prof. S. H. Graf, Oregon State College; R. E. Gibbs, Montana State College; Mrs. and Prof. G. A. Riedesel, Univerisity of Idaho. Back row; left to right: Prof. E. B. Parker, Washington State College; Prof. R. D. Sloan, Washington State College; Prof. C. A. Arents, Oregon State College; Mrs. H. F. Gauss; Prof. F. W. Vernon, University of British Columbia; Prof. H. F. Gauss, University of Idaho; Mrs. and Prof. R. W. Crain, University of Washington.*

## Authorize completion of final Ross Dam stage

Seattle, Wash. has approved plans of E. R. Hoffman City Light superintendent for continuing without interruption construction of Ross Dam by awarding a contract for the third step as soon as the present second step is completed. The Board of Public Works authorized Hoffman to file a formal application to the Federal Power Commission for a permit to extend the dam's height to El. 1620, maximum height possible on the present base.

The third step will add 70 ft. to the height of the dam, as the unit now under construction will carry the structure to El. 1550. It will increase the storage behind the dam from 676,000 acre-ft., as it will be when the second unit is completed, to 1,400,000 acre-ft.

Energy total will be increased from 338,000 kilowatt-hours for the complete second unit to 700,000 kilowatt-hours. The third unit also will prepare the way for construction of the Ross power house with its four generators.

Hoffman estimates that to add the 70 additional feet while all construction equipment is on the job would cost about $3,700,000. The present contract, held by a combination of three firms: The General Construction Co., J. F. Shea Co., Inc., and Morrison-Knudsen Co., Inc., is expected to be completed next March.

Future plans for the dam call for strengthening the base and increasing the height to 675 ft. from the 545 ft. it will attain through the third step. The dam then will provide 3,450,000 acre-ft. of storage, a 40-mile-long lake extending beyond the Canadian border.

## Boston society offers hydraulic scholarship

Under the John R. Freeman Fund the Boston Society of Civil Engineers is offering a scholarship covering a year's study or research in connection with hydraulics or an allied science. A stipend of $2,400 will be provided for tuition, traveling and living expenses for a single man or $3,000 for a married man.

To be eligible, candidates must be American citizens, at least 24 years of age, graduates of a technical school of recognized standing. Preference in selection will be given to residents of New England and eastern New York north of New York City.

Further particulars may be obtained from the secretary of the Boston Society of Engineers, 715 Tremont Street, Boston, Mass. Applications must be received not later than July 15 next.

## Limit Jap industry to control war potential

(*Continued from first page*)

banning of research and development of any kind of atomic energy.

### Personnel of committee

The National Engineers Committee was appointed by the Engineers Joint Council in February, 1945, at the request of the Secretary of State to make "studies and proposals bearing upon the industrial disarmament of aggressor states". At the present time the committee consists of H. Foster Bain, Charles W. E. Clarke, Sidney D. Kirkpatrick, Harry S. Rogers, R. E. Zimmerman and Carlton S. Proctor, chairman.

In September of last year this committee submitted a report on reducing the war potential of German industry (*ENR* Oct. 4, 1945, vol. p. 415) which is being closely followed by the military forces in Germany today.

The Engineers Joint Council is made up of the presidents, most recent past presidents and secretaries of the four Founder Societies and the American Institute of Chemical Engineers.

## Calendar of Meetings

### NATIONAL

**American Congress on Surveying and Mapping**, annual meeting, Hotel Statler, Washington, D. C., June 28-29.

**American Society for Testing Materials**, 49th annual meeting, Hotel Statler, Buffalo, N. Y., June 24-28.

**Society for Experimental Stress Analysis**, spring meeting, Hotel Statler, Buffalo, N. Y., June 24-26.

**Chinese Institute of Engineers**, America Section, annual convention, Hotel New Yorker, New York, N. Y., June 29-July 1.

**Associated General Contractors of America**, Washington, D. C., spring governing and advisory board meeting, Sherley-Savoy Hotel, Denver, Colo., June 29-July 2.

**American Society of Civil Engineers**, 1946 summer convention, Davenport Hotel, Spokane, Wash., July 17-20.

### REGIONAL

**Upper Peninsula Road Builders' Association**, annual meeting, Houghton, Mich., June 24-25.

**New Jersey Section, American Water Works Association**, summer meeting, Little Falls, N. J., June 28.

**Ninth Annual Short Course for water and sewage personnel**, Louisiana State University, Baton Rouge, La., July 25-27.

**American Shore and Beach Preservation Association**, summer meeting, The Breakers, Cedar Point, Ohio, Aug. 15-17.

## Work started to prevent Red River bank caving

Under the supervision of the U. S. Army Engineers, work has started on an emergency bank protection at Lucas Bend on the Red River in Louisiana. This is to check bank caving which is said to have cost Caddo Parish $2,470,000 in the last 38 years.

Concrete mats will be used in stabilizing the banks. The emergency program will cost $175,000. This is part of the $3,000,000 Shreveport bank stabilization program, $500,000 of which has already been authorized.

## Starts work on N. Y. housing authority project

Construction started June 3 on the foundations of the Brownsville Houses—low-rent public housing center in Brooklyn, N. Y. which will accommodate 1,338 families. The Brownsville group is the second in a series of permanent post-war projects to get under way under current plans of the New York City Housing Authority.

Maxwell H. Tretter, executive director of the authority, said that if materials are available, the first families should be able to move into the settlement during April, 1947. The development will consist of twenty-seven buildings, three and six stories high, and is to be financed with loan funds from the State.

On two other projects, Marcy Houses, a 1,717-apartment center in Brooklyn and the Abraham Lincoln Houses, a 1,286-apartment project in Harlem, bids will be asked by the New York City Housing Authority on July 9 and July 23, respectively.

## Aerial mapping planned for Missouri basin work

Aerial photographs will be used by the Bureau of Reclamation in speeding up design and planning work on irrigation and power projects in the Missouri River Basin, Commissioner Michael W. Straus has announced.

Planes carrying high-speed camera equipment will photograph the land area of seven projects in the upper basin, the commissioner said in authorizing the award of a $199,840 contract to the Fairchild Aerial Surveys, Inc., of Los Angeles, for the work.

Bureau engineers will use the photos in obtaining data and technical information needed for land classification studies and in the design and location of engineering works.

## OBITUARY

**J. Ross Eakin,** 66, superintendent of the Great Smoky Mountains National Park in western North Carolina and eastern Tennessee from 1931 until his retirement over a year ago, died at Johnson City, Tenn., June 8. He was graduated from the college of engineering at the University of West Virginia, and was with the U. S. Geological Survey from 1903 until 1921, except for his overseas service as a captain in World War I. After leaving the Geological Service he was transferred to the National Park Service, serving as superintendent of the Glacier National Park and as superintendent of the Grand Canyon National Park prior to being assigned to his final post.

**Arthur Vernon Bechtel,** 63, contractor, died June 6 in Oakland, Calif. Since 1906, he and his brother W. A. Bechtel, who died in 1933, had been identified with many of the great construction projects of the western United States and other parts of the world. Their first big job was building of the Richmond Belt Line Railroad. They laid a pipe line from Texas to Chicago. After W. A. Bechtel's death, the surviving brother joined with W. A. Bechtel's sons and had a hand in the building of such projects as Grand Coulee Dam, The San Francisco-Oakland Bay bridge, and the Canol pipe line.

**Harold R. Holmes,** 61, chief sewer engineer for the bureau of sewers of the city of Milwaukee, Wis., for about 20 years, died June 6. He was a civil engineering graduate of Princeton University.

**John McCleary,** 66, contracting engineer and retired vice-president of the Virginia Bridge Co., died June 1 in Roanoke, Va. He was at one time manager of the Birmingham plant of the company, a subsidiary of the United States Steel Corp.

**Merle O. Weaver,** 53, died in Des Moines, Iowa, June 8. He was president of M. O. Weaver Inc., a concern which produces crushed stone and other concrete aggregates.

**C. M. Rasor,** 73, California engineer, died at San Gabriel on May 22. He was in charge of construction on the Tonopah & Tidewater Ry. into Death Valley when it was built in 1905, and in 1942 he supervised the work when the line was torn up.

**Miner W. Buell, Sr.,** 66, chief of the chart revision section of the Navy Hydrographic Office, died June 5 in Washington, D. C. A native of Mitchell, Iowa, Mr. Buell was graduated from the University of Colorado as a civil engineer in 1903 and joined the Geological Survey office in Denver. The next year he was appointed to the Hydrographic Office and served aboard various survey ships as a field engineer on charting expeditions in the tropics. Mr. Buell's home had been in Washington for 32 years.

**William Ellery Barton,** 72, Stamford, Conn., chief supervisor of the United States Housing Administration, Washington, D. C., died June 3 at Stamford, Conn.

**Ben T. Davis,** who built the Davis Causeway across Tampa Bay, Fla., died June 3 at Harlingen, Tex., where he was constructing another causeway.

Captain Davis built the Tampa causeway across nine miles of water in 31 months, during which many engineering difficulties were overcome. The cost was approximately $900,000. The causeway was opened for traffic in 1934 and in 1944 it was sold to the Florida State Road Department for $1,074,000.

**James T. Howington,** 60, civil engineer, and a director of the Smaller War Plants Corp., died in Washington, D. C. June 11. He had practiced as a civil engineer and was in business in Louisville, Ky.

**John T. Pritchett,** 48, associated with the United States Engineers on the Great Lakes for many years, died in Cleveland, Ohio, June 1.

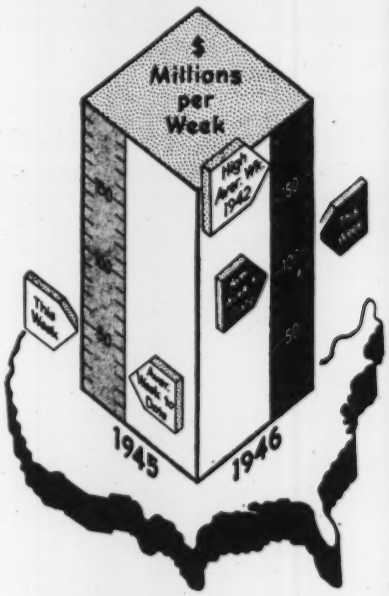
## New Susquehanna bridge near Binghamton planned

Assurance that the state of New York will build a $1,000,000 bridge across the Susquehanna River, connecting Johnson City and the town of Vestal, and that it will be completed by the middle of 1948, has been given by Charles H. Sells, state commissioner of public works.

Commissioner Sells conferred at Binghamton recently with business and civic leaders concerning the proposed bridge, which they have been advocating. He inspected proposed sites, but did not indicate which one may be selected. The bridge structure, he said, will cost approximately $600,000 while building approaches and the property damages resulting will cost the additional $400,000.

Contracts for the bridge will not be let before the spring of 1947, Commissioner Sells said, and from 12 to 14 months will be required for the job. In the meantime, Frank W. Donovan, Binghamton district engineer, will make surveys that will take from two to three months to complete.

## CONSTRUCTION ACTIVITY




As Reported this week to... *Engineering News-Record*

### CONTRACT VOLUME

Continental U. S. Only (Thousands of Dollars)

| | Week of June 20 1946 | Cumulative 1946 (25 wks.) | Cumulative 1945 (25 wks.) |
|---|---|---|---|
| Federal | $17,946 | $298,158 | $465,585 |
| State & Mun. | 28,864 | 610,693 | 121,865 |
| Total Public | $46,810 | $908,851 | $587,450 |
| Total Private | 58,974 | 1,594,729 | 242,165 |
| U. S. Total | $105,784 | $2,503,580 | $829,615 |

### WHERE CONSTRUCTION ACTIVITY ORIGINATED THIS WEEK

Dollar Volume (Thousands)

| Type of Work | This Week | Cumulative 1946 (25 wks.) | Cumulative 1945 (25 wks.) |
|---|---|---|---|
| Waterworks | $1,350 | $45,071 | $18,672 |
| Sewerage | 2,022 | 44,220 | 13,779 |
| Bridges | 3,504 | 58,987 | 12,583 |
| Highways | 14,038 | 344,398 | 85,391 |
| Earthwork, Waterways | 14,026 | 185,857 | 16,647 |
| Buildings, Public | 10,014 | 155,970 | 300,907 |
| Industrial | 19,518 | 511,558 | 168,988 |
| Commercial | 36,748 | 975,543 | 42,100 |
| Unclassified | 4,564 | 181,976 | 170,548 |

NOTE: Minimum size projects included are: Waterworks and waterway projects, $22,500; other public works, $40,000; industrial buildings, $55,000; other buildings, $205,000.

### NEW PRODUCTIVE CAPITAL

| | Cumulative 1946 (25 wks.) | Cumulative 1945 (25 wks.) |
|---|---|---|
| NON-FEDERAL | $495,097 | $281,875 |
| Corporate Securities | 193,070 | 79,670 |
| State and Municipal | 302,027 | 181,305 |
| RFC Loans | ..... | 20,900 |
| REA Loans | ..... | ..... |
| Fed. Aid Highway | ..... | ..... |
| FEDERAL | 158,320 | 251,010 |
| Total Capital | $653,417 | $532,885 |

### ENR INDEX NUMBERS

| Index Base = 100 | | 1913 | 1926 |
|---|---|---|---|
| Construction Cost | June 1946 | 347.91 | 167.24 |
| Building Cost | June 1946 | 264.16 | 142.80 |
| Volume | May 1946 | 284 | 125 |

GIN
LIB